CLARES

PRO • Artisan 2

ADVANCED PAINTING

IMAGE PROCESSING

MANUAL

ProArtisan 2

Release 1.00

Programmed by

Frank C. Dart & Jon Warmisham

Published by
Clares Micro Supplies
98 Middlewich Road
Northwich
Cheshire
CW9 7DA

© Clares Micro Supplies, F.C. Dart and J. Warmisham 1993

All rights reserved. No part of this manual or of the computer programs to which it relates may be reproduced or transmitted in any form whatsoever or by any means electronic, mechanical or otherwise without the prior written consent of Clares Micro Supplies.

Whilst Clares have endeavoured to ensure that this program will perform correctly no responsibility is accepted by Clares relating to this program. As we have no control over the use made of the program no warranty is given or should be implied as to the suitability of the programs described in this manual for any particular application. No liability can be accepted for any consequential loss or damage, however caused, arising as a result of the use of this program.

A reward of £500 is offered for evidence leading to a successful settlement against any individual, company or institution producing illegal copies of any of Clares products.

Acknowledgements
The modules FPE, Clib, Colours, MsgTrans, Squash and WimpUtils are copyright of Acorn Computers Ltd.

End-user licence conditions for ProArtisan 2

1. Definitions: The following expressions have the meanings given here:
'Clares' means Clares Micro Supplies being either owner of all intellectual property rights in the Software or having the right to grant licences of the Software.
'Documentation' means the printed documentation supplied for use with the Software.
'Software' means the applications, utilities, and modules supplied in this pack.

2. Licence

Clares grant you a personal non-transferable non-exclusive licence (or sub-licence), as follows:

a) You may make one copy of the Software for backup purposes, to support its use on one stand-alone Acorn computer system. For the avoidance of doubt, this means that you may only run this software on one stand alone Archimedes computer. You may not run it on more than one computer at a time, either by using backup copies of the disc or by moving one disc from computer to computer. To do this you require a site licence from Clares. Nor may you run this program on any sort of network without first obtaining a network licence from Clares.
b) You must ensure that all copyright notices contained in the Software are reproduced in any copy of the Software.
c) You may not copy all or part of the Software and documentation nor make any part of it available to a third party by way of gift, loan or hire. You may not include any part of the Software into programs developed or used by you without the permission of Clares.
d) You may not disassemble, reverse assemble, reverse compile or interpret the licensed Software.
e) You may not disclose any confidential information relating to the Software that comes into your possession by whatever means.

3. Term

This licence remains in force unless you terminate it by destroying all copies of the Software and documentation or by failing to comply with these conditions.

4. Disclaimer

a) The Software is supplied 'as is'; neither Clares nor its licensers make any warranty, whether express or implied, as to the merchantability of the software or its fitness for any particular purpose.
b) In no circumstances will Clares be liable for any damage, loss of profits, goodwill or for any indirect or consequential loss arising out of the use of the Software, or inability to use the software, even if Clares have been advised of the possibility of such a loss.

5. General

a) These conditions supersede any prior agreement, oral or written, between you and Clares relating to the Software.
b) Purchase or receipt of this Software and documentation is deemed to be acceptance of these licence conditions.

Contents

1. Introduction	5
2. Getting Started	9
3. The Icon Bar Menu	17
4. The Canvas	19
5. The Paint menu	23
6. The Drawing menu	33
7. The Sprite menu	39
8. Input/Output Menu	47
9. The Process Menu	55
10. Appendix 1 - Quick Examples	69
11. Appendix 2 - !Options	73
12. Appendix 3 - Colour Cards	74
Index	75

Blank page

1. Introduction

ProArtisan 2 is a multi mode art and image processing application for the range of Acorn RISC OS machines. A great deal of effort has gone into creating a user interface that gives access to the power of ProArtisan 2 without making it complex to use.

Using ProArtisan 2 you can create and manipulate stunning images with ease. The user interface has been designed to be as intuitive as possible so that even inexperienced users can access its features without constant reference to this manual.

Typographic conventions

- Mouse buttons or keys on the keyboard appear in Corpus font: `Select`
- Special terms or jargon appear in italics when first introduced: '*Frisket...*'
- Instructions to press a key on the keyboard are shown in Corpus font eg `Return`. This means press the Return key on the keyboard.
- Menu options that may be selected are in Homerton font: 'Click on Edit to... ' means choose the option called Edit from a menu.
- Menu options which lead to sub-menus have an arrow after them: Subset ▸
- Options in dialogue boxes or options in windows are in Homerton font: Initialise
- Something important always appears **in bold.**

Conventions used in this guide

We use the standard Acorn conventions for the mouse buttons:

`Select`	is the left button, and the most commonly used.
`Menu`	is the middle button and is used primarily for opening menus.
`Adjust`	is the right mouse button.

Unless otherwise stated **Choose** means move over something and click on it with `Select` or `Adjust`.

Inserting a disc into the floppy disc drive and clicking on the disc drive icon is known as *Mounting the disc*. The disc's *Directory display* appears after you perform this operation.

Error or message dialogue boxes may appear from time to time. Read them before clicking on a button as you may lose data otherwise.

It is assumed that you have read the Welcome Guide supplied with your Archimedes and are familiar with the RISC OS Desktop environment.

The Future

The product you hold in your hands is 'finished' to the extent that it contains no known bugs. However, we have plans for enhancements to this software. If you have any constructive criticism or advice then it will be most welcome. Please send any such ideas or requests in writing to Clares.

ReadMe

A file called ReadMe is supplied on the disc. This gives up to date information that has arisen since this manual was printed. The file is in text format and should be loaded into Edit, which is supplied with your computer.

Initialising Your Program Disc

It is assumed that you know how to format and backup a floppy disc. If you do not please read the Welcome guide which came with your computer before continuing. You must initialise your disc before backing it up.

The first time that you catalogue the Proartisan 2 disc you are required to go through an initialising procedure. A box pops up asking you to enter your name and address details. When you have entered these correctly the program is initialised and the disc is returned to a state in which it can be backed up.

Note: The details that you enter into the box will be shown each time you run the program but the box then disappears once a certain action is carried out within the program, or a time has elapsed. It is important that you enter the correct details when initialising your disc as we will only return discs or provide upgrades to the address given on the disc. If you return a disc to us for any reason we will automatically read off the details from the disc and return it to the specified address. Changes of address must be notified to us and the program disc returned for alteration. Please supply a SAE.

Making a backup

Once you have initialised your disc, make a backup for everyday use and store the original in a safe place.

If you are not sure of how to do this please refer to your Welcome guide.

Hard disc installation

This procedure is standard RISC OS. First select your preferred directory for the **ProArtisan 2** application, and then drag the ProArtisan 2 icon to that directory display.

If you wish to use ProArtisan 2 in conjunction with other programs it may be sensible to have all of these applications in the same directory.

You have now completed installation of ProArtisan 2 on the hard disc. Whenever you are told to 'insert the work disc' elsewhere in this manual simply open the correct directory display on your hard disc.

Updating !System

ProArtisan 2 uses some modules that reside in the *System* folder. To ensure that you have the latest version of the relevant modules you should run the *!SysMerge* application by double clicking on the icon. Follow the instructions in the window. The original **!System** is the one on your hard disc or on your normal System disc and the new **!System** is the one supplied with this program. The application automatically updates your !System so that you have the latest versions of the required modules.

!Help

ProArtisan 2 has extensive support for the !Help application supplied with your computer. When you first start using ProArtisan 2 we suggest that you have !Help loaded - memory permitting.

Technical Information

ProArtisan 2 is a 256 colour painting package. These colours are held as 24 bit values and can be selected from a palette of 16.7 million colours - even on RISC OS 2. However, unless you have additional hardware such as the Computer Concepts/Wild Vision Colour Card or one of the State Machine cards you will be unable to see these additional colours on your computer.

When one of these cards is fitted you will be able to choose and see any of the 16.7 million colours.

Images created in ProArtisan 2 can be any size or resolution provided that your machine has enough memory and it supports the resolution that you want to work in.

Internally your images are always held at high resolution and in 24 bit colour, even when you work in a low resolution or low colour mode. When you return to a higher resolution mode the image is restored to the correct resolution. In other words, changing mode does NOT convert the image to that mode and potentially lose information. The image is only converted to another mode at save time and only then if you instruct ProArtisan 2 to save in another mode.

2. Getting Started

What do I need ?

To run ProArtisan 2 you need an Acorn machine fitted with RISC OS (RISC OS 3 is recommended but ProArtisan 2 does work with RISC OS 2 as well) and a minimum of 2 megabytes of RAM. Like most applications you will benefit from having more RAM. You can work with a standard resolution monitor in mode 15 but a multiscan monitor is recommended to give access to the higher resolution of ProArtisan 2. If you are working with a standard resolution monitor you may find it useful to use a 200% zoom factor. Remember, that although you are working in mode 15 the image is still stored in the equivalent of a mode 21 screen and if you save out in the normal way (ie not using the Save as option) the image will still display in high resolution on a multiscan monitor at a future date.

Note: If you are using RISC OS 2 the icons will not be 3D as shown in this manual.

If you have a Wild Vision/Computer Concepts Colour Card from or one from State Machine then you will also be able to use the true 256 colour palettes. The results are stunning and compare favourably with 24 bit images on other computers.

Running ProArtisan 2

Run ProArtisan 2 by double clicking on the !ProArt icon in the directory display. The ProArtisan 2 icon will then appear on the icon bar. To open the ProArtisan 2 Create window click on the icon with `Select`.

The ProArtisan 2 Philosophy

ProArtisan 2 is a very sophisticated art program with many image processing facilities added. This provides you with a very flexible environment in which to explore your talents.

The ProArtisan 2 tools are designed in such a way as to be used in conjunction with other tools. For example our rather unique Emboss feature can be used with different Blends to provide embossed images in any number of colour ways.

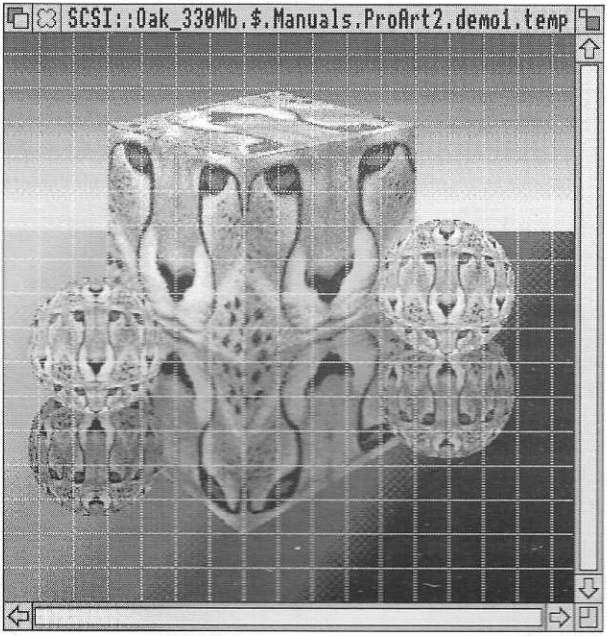
Another major consideration behind the ProArtisan 2 design is that all functions should be carried out quickly so as not to interrupt the creative flow. Probably the slowest tool you will use is the Anti-alias function on a complex picture but even this is quick when compared to other machines.

A Short Tutorial

To get you into ProArtisan 2 as quickly as possible the following tutorial takes you through manipulating an image to introduce some of the basic tools. Remember that you can use tools in conjunction with others and it is this which makes ProArtisan 2 so powerful. Do not be afraid to try out different things as there are so many possible combinations that we are unable to cover them all in this manual. We will try to point out interesting effects when appropriate.

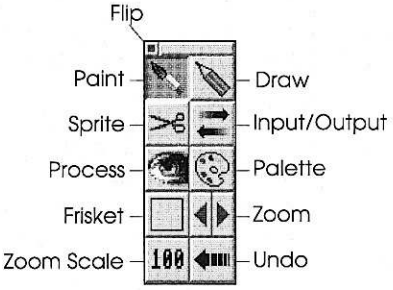
The image that we are going to create uses several concepts which are central to the ProArtisan 2 philosophy. Whilst you could simply follow the instructions one by one and achieve the desired end image we recommend that you go to the relevant pages in the manual and understand the features used. Icons are shown in the following tutorial. Instructions to use a particular menu item are written as Paint ▸ Fill ▸ Plain where Paint is the name of the icon in the Tool pane, Fill is the item in the main Paint menu and Plain is the item in the Fill sub menu.

The target image with an overlaid grid is shown below.



If possible use a multiscan monitor in mode 28. If you do not have a multiscan monitor use mode 15 instead.

The diagram below introduces the Tool pane.



1) Load ProArtisan 2 and click on the icon on the icon bar to bring up the Create window *(page 17)*. Create a canvas 400 pixels wide by 400 pixels high.

2) Click on the Draw icon and press Menu with the pointer on the canvas. Click on the Grid item *(page 37)* to turn the grid on. Set the grid size to 48 units in the Grid sub menu. This makes your canvas approximately 15 by 15 grid squares.

3) Click on the Sprite icon, which also brings up the Sprite pool window. Drop the sprite called **Cheetah** onto the Sprite pool *(page 42)* window to load it into the pool.

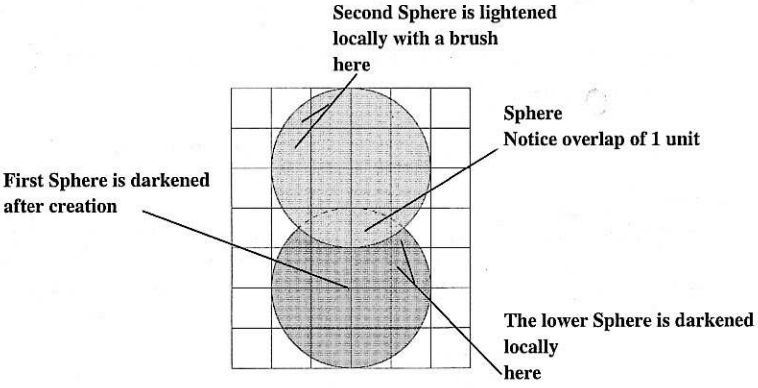
4) Click on the Vertical Sprite Flip icon *(page 43)* to flip the cheetah vertically.

5) Click on Sprite ▸ Sphere *(page 42)* and drag out a sphere with a radius of 2 grid units in the lower half of the screen. Drag out the sphere horizontally to lock to the horizontal grid lines. Dragging diagonally locks to the diagonal grid points.

6) Use Process ▸ Filters ▸ Darken *(page 60)* set to 40% to darken the image.

7) Click on Sprite ▸ Vertical Sprite Flip icon *(page 43)* to flip the cheetah vertically.

8) Add another sprite sphere the same size but overlapping by one unit as shown in the diagram overleaf.


Second Sphere is lightened locally with a brush here
Sphere
Notice overlap of 1 unit
First Sphere is darkened after creation
The lower Sphere is darkened locally here

9) Select white from the Palette *(page 20)* and set the Opacity slider to 20% *(page 21)*. Goto Paint ▸ Brush Shape *(page 23)* and select a medium brush size. Using Paint ▸ Paint lighten the area indicated on the top left of the top sphere above.

10) Change the colour to black and using 20% Opacity again, darken the area indicated on the bottom sphere.

11) Set Opacity on the Palette to 100% and choose a blue on the edge of the palette. Using Paint ▸ Fill ▸ Plain *(page 29)* fill the background. Use Paint ▸ Paint with a small brush if the fill does not get all areas, particularly any overlap that you got when doing the Lighten and Darken.

12) Set Sprite ▸ Transparent *(page 42)* to the same blue that you used to fill.

13) Using Sprite ▸ Cut ▸ Rectangular *(page 39)* cut out the two spheres in one sprite. Grid lock should still be active enabling you to cut right at the edges of the spheres.

14) The sprite will appear in the Sprite pool. Give it a name, **spheres**.

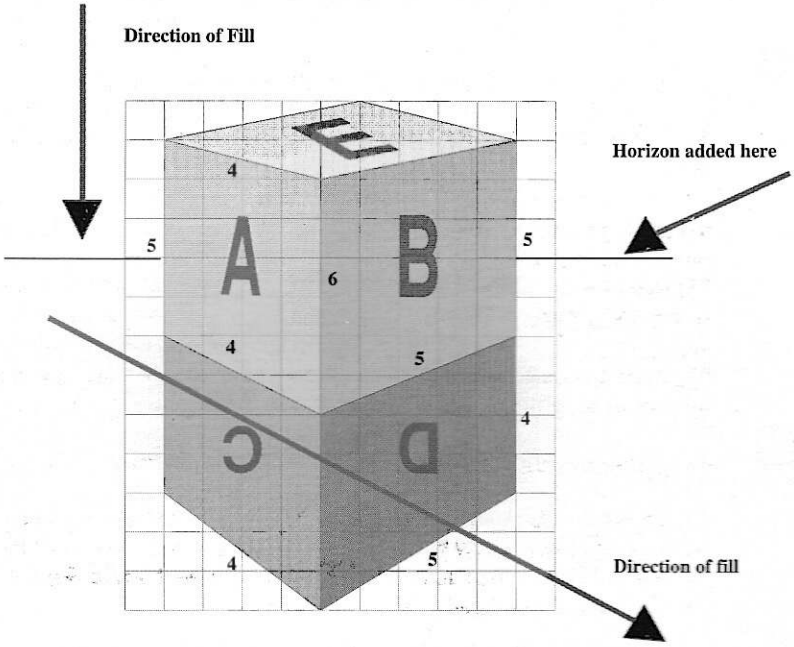
15) Go to Input/Output ▸ Save Pool *(page 48)* and save the sprite pool to disc in squashed format. If you make any errors later you can now drop the sprites back into the Sprite Pool and continue from this point.

We are now going to create a cube.

16) Select white from the Palette and click on Process ▸ Clear Screen *(page 55)* to clear the screen to white.

17) Ensure that you have the **Cheetah** sprite selected *(page 43)*.

18) Using Sprite ▸ Distort *(page 41)* drag out a distort box 4 by 4 units (start from 3 squares in and 3 down - ignore the half square at the top)) and using `Adjust` drag the control points to provide the shape of the area marked **A** in the diagram below. When you click `Select` the Cheetah is plotted into the area.



19) Do the same for the area marked **B** and **E** in the diagram.

20) Click on the Vertical Sprite Flip icon *(page 43)* to flip the cheetah vertically and then use Sprite ▸ Distort to do areas **C** and **D**.

21) Set Draw ▸ Style *(page 36)* to do filled areas.

22) Toggle the Frisket icon to Create Frisket *(page 56)*.

23) If a Frisket is set (shown as areas of red) do a Process ▸ Clear Screen *(page 55)* to remove it. You **must** do this anyway when doing steps 30 to 32.

24) Select Draw ▸ Line *(page 34)*.

25) Bring up the Palette and click on Set Frisket, the red colour *(page 22)*, there will only be red or white cross hatch to choose from.

26) Now draw around area **D** by clicking at the four corner points. Grid lock should still be on. The area should turn red indicating that a Frisket has been created.

27) Click on Process ▸ Invert Frisket *(pages 55 & 57)* and now the only area visible should be area **D**. This is the area that will be affected by the next process.

28) Toggle the Frisket icon to Frisket Active *(pages 56-58)*.

29) Apply Process ▸ Filters ▸ Darken with a value of 50% *(page 60)*.

30) Repeat steps 22 to 29 but on area **C** instead of area **D** and use a value of 35% in step 29 instead of 50%.

31) Repeat steps 22 to 29 but on area **B** instead of area **D** and use a value of 25% in step 29 instead of 50%.

32) Repeat steps 22 to 29 but on area **E** instead of area **D**. This time you need to do a Process ▸Lighten *(page 60)* with a value of 25%.

33) Toggle the Frisket icon to Frisket Inactive *(page 56)*.

34) Set the line thickness in Draw ▸Style *(page 36)* to about 10 and the style to outline only. Using Draw ▸Line *(page 34)* draw a horizon line in a blue (drag out the line and use `Adjust` to finish the line) as indicated on the diagram from the edges of the cube to the edge of your window.

35) Use Paint ▸ Fill ▸ Plain *(page 29)* with the same colour as the line and fill above the horizon.

36) Turn the grid off by pressing `Ctrl G` on the keyboard.

37) Select Paint ▸ Fill ▸ Angled *(page 30)* and also tick the Dither option in the Fill menu. Note that clicking on a menu item with `Adjust` selects the item but leaves the menu on screen. Now select Paint ▸ Blends *(page 32)* number 4.

38) Fill the filled area at the top by dragging the fill arrow from the just below the top of the canvas to the horizon line.

39) Select Paint ▸ Blends number 3 and click on the Blends flip icon so that the Blend runs light to dark. Drag the fill arrow from the left of the cube to the bottom right of the canvas as shown in the diagram.

40) Ensure that **Spheres** is the current sprite (the one showing in the pool).

41) Click on the sprite in the pool and place the spheres on the bottom half of the canvas as shown on the final image.

42) Try doing the same but using different sprites for the different faces of the cube. You can also create and use your own sprites.

Blank page

The Icon bar Menu

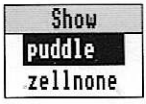
The first menu to deal with is the Icon Bar Menu. You access this by pressing Menu on the mouse whilst the pointer is over the ProArtisan 2 icon on the icon bar.

Info ▸

This item contains the details of the authors of the program and its basic function.

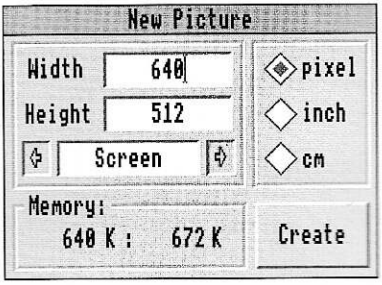
Show ▸

This sub menu brings up a list of the images currently loaded in ProArtisan 2. Click on a name to show the image on the desktop. If there are no images loaded or all images are already displayed this item is greyed out.



Create ▸

This item leads to a window where you can decide the size that a new canvas will be created at. This dialogue can also be invoked by clicking on the ProArtisan 2 icon on the icon bar.



Canvas units

You can select the units that you wish to work in by clicking on the required button on the right of the window. The options are Pixel, Inch or Centimetre.

Canvas size

You can set the size of the canvas either by entering the size into the Width and Height boxes, followed by `Return`, or by selecting one of the presets using the arrows either side of the box containing the word **Screen**. As you toggle through them you will note that the size of the canvas and the memory required are also shown. The second memory figure shows the amount of free memory available thus enabling you to see if the required size can be created.

Remove ▸

This sub menu brings up a list of the images currently loaded in ProArtisan 2. Click on a name to remove the image and free the memory. If there are no images present this item is greyed out.

Remove all

Click on this item to remove all images currently loaded in ProArtisan 2. A warning box tells you if images have not been saved. If there are no images present this item is greyed out.

Minimise

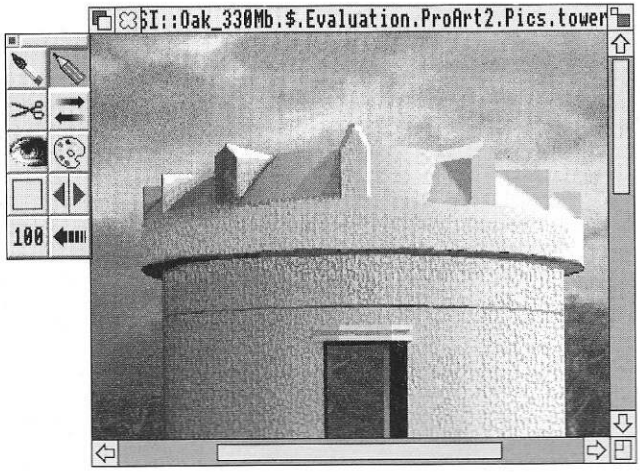
You can only click on this item when no images are loaded. Clicking on it provides you with more memory by removing the Undo facility. The removal of the Undo screen means that some of the Effects and Filters do not work and are greyed out. Some other items work in a slightly different way. We do not advise that you work in this mode except when absolutely necessary. You may for example have a large image that you want to change slightly but do not have enough memory ordinarily. If you have used a Frisket you should try to recover the memory from this first by clicking on Process ▸ Remove Frisket. A Frisket cannot be used when Minimise is active.

Quit

Click on this to quit the program. You are prompted if there is any unsaved data.

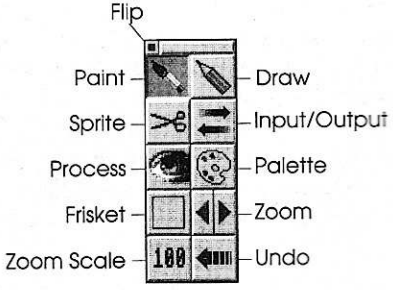
4. The Canvas

The main window is made up of the edit window, called the canvas, and a tool pane. Each tool in the pane is accessed by clicking on it with `Select`. Each tool has its own associated menu which is brought up by pressing the mouse `Menu` button with the pointer on the canvas.



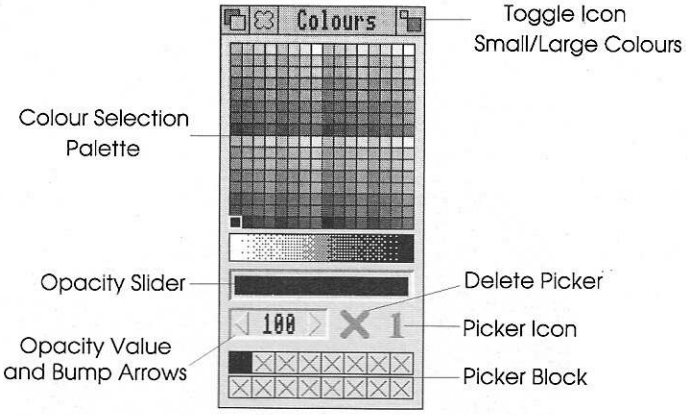
The Tool pane can be flipped horizontally by clicking on the red icon in the top corner. The pane can also be offset from the canvas by dragging it with its title bar. The pane then maintains that offset from the canvas when it is moved.

The Tool pane is the core of ProArtisan 2. It gives access to all of the functions available. There are ten icons on the Tool pane and five of these give access to five different menus. The others are options in their own right or are for information. The reason for having the Tool pane and associated menus is to simplify the use of the program. The icons and menus relate to useful groupings of tools. This method also reduces the number of menu levels that you need to move through in order to get at the function you require.



Palette

The Palette explanation is taken out of turn and explained here so that you are able to access it correctly as you work through the rest of the reference section.



Show Palette

The 256 colour palette window can be viewed by clicking either `Select` or `Adjust` on the above palette icon in the tool pane. Clicking on the toggle icon at the top right switches between a large and small palette display.

Selecting Colours

Colours can be selected in a variety of ways. The obvious way is to click on the required colour in the palette window. The chosen colour is immediately added to the block of 16 colours at the bottom of the window. This is known as the Picker. The 16 colours shown are the last 16 that you have used. These 16 colours can be chosen in a variety of ways. You can also select a colour from this block by clicking on it.

You can also select colours off the canvas by clicking on the required colour with `Adjust`. This places the colour in the Picker block if it is not already there. In addition to picking one colour you can click on the Picker icon represented by a '1' icon in the palette to toggle it to '16'. Now when you click on the canvas with `Adjust` the program picks up as many colours as it can find in the vicinity, up to a maximum of 16. This is very useful for putting colours into the Magic Brush, described later.

Clicking Adjust on the '1' or '16' icon inserts the set of current blend colours into the Picker block. A Blend set usually consists of up to 16 colours, although sometimes this may be fewer and with a colour card it can be up to 256 colours. Blend sets are used primarily for filling but being able to transfer the Blend set into the Picker block allows you to use the Blend set in many other ways. For example, if you had done a fill with a Blend set and wanted to edit the area slightly you can ensure that you have the same colours available by transferring the blend colours in this way.

The colours in the Picker block are used whenever you have the Sample option ticked in the menus. For example a Spray with Sample ticked uses the colours in the Picker block. The same applies for Special ▸ Dopple and Special ▸ Diffuse.

Delete Picker

Clicking on the 'X' icon above the Picker block deletes all but one of the colours in the block. There must always be one colour selected and shown here.

Opacity

The graded block under the main palette area is an indication of colour opacity which applies when using the Brush option. The degree of opacity can be set using either the black slider or the bump arrows either side of the percentage figure. The percentage figure shows the amount of colour opacity that is used when a colour is applied. A value of zero means total, or almost total, transparency depending upon the range of colours available A value of 100 means total opacity and so results in the selected colour being applied and totally obliterating any colour over which it is applied.

Different degrees of opacity create different effects when applied to a colour already on the canvas. By adding a colour with less than 100% opacity to the canvas the new colour and the colour on the canvas are mixed together giving a new colour. This works as you would expect it to if you were using real paints.

Frisket

ProArtisan 2 has a **Frisket** facility which enables you to protect parts of the canvas from alteration by any of the tools. It has the reverse effect of a cardboard **stencil.** With a stencil you can only paint through the stencil onto the area where the stencil is cut out. With a Frisket the area **'cut out'** cannot be painted on.

The word frisket originally referred to a frame on a hand printing press that carried a piece of parchment to protect the non printing areas. So any area defined as a frisket in ProArtisan 2 is a non printable area ie you cannot change it.

If you are creating a frisket the palette changes to show just two colours - Set Frisket and Unset Frisket. The colours shown are normally red and a cross hatch. The red colour can be changed in the Process menu with the Frisket Colour option. The Frisket option is explained in detail later on page 55.

The next two items are also taken out of turn but they are tools that you will find useful from the start.

Zoom

The Zoom option has two icons. The first shown above enables you to zoom up or down by clicking on the relevant arrow. The second icon shows the current zoom size. You can click on the Zoom scale icon with `Select` to revert to 100% size. Clicking on the Zoom scale icon with `Adjust` reverts to the previous zoom size. Note that all ProArtisan 2 tools work at any zoom scale.

Undo

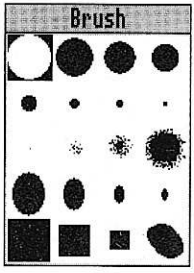
The Undo icon enables you to undo any actions taken since the canvas was last confirmed. ProArtisan 2 does this by holding a back screen which keeps the image as it was. In general a screen is 'confirmed' when you choose a new tool from the Tool Pane or select a new colour from the Palette. In some circumstances changing tool mode does not force a confirm. For example, going into the Process menu to use the Make Last item still enables you to undo the changes thus enabling you to make a Frisket from your last action and then delete your last action.

Painting mode

Click on this icon to enter Paint mode and then press Menu with the pointer on the canvas. This brings up the Painting menu.

Brush Shape

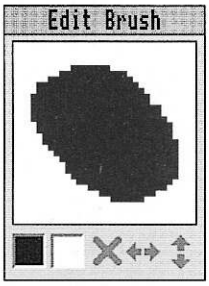
Follow the arrow on this item to open the Brush selection box. To select a brush click on it with Select (holding Shift down at the same time also selects a pointer in the shape of the brush, except for small brushes when a cross hair is used instead). The selected brush is highlighted, as with the first brush in the window below. To paint with a brush move the pointer on the canvas with Select held down. The brush uses the current colour and opacity, which can be changed using the Palette option (see page 20).



Frisket - if you are creating a frisket the brush is used to paint into the frisket.

Edit Brush ▸

This item leads to a box where you can create your own brush shape.



The two boxes at the bottom allow you to choose from Set pixel (black) or Unset pixel (white). Any white areas on the design are transparent. You can clear the brush design area by clicking on the X icon. This clears to either white (totally transparent) or black (a large square black brush) depending upon which is chosen at the time.

The other two icons allow you to flip the brush in the horizontal and vertical axis respectively.

When a brush is designed it appears as the last brush in the Brush Shape menu described earlier. You can then select it as your brush template and paint in the current colour. The brush template is also used wherever a normal brush template is used. Imagine the effects you can create by designing a *polo* shape brush and using this when using Magic Brush - the possibilities are endless.

Frisket - The created brush can be used when creating a frisket.

Paint

Click on this item to paint on the canvas in the current colour. Note that selecting a brush shape does not automatically select Paint mode as brush shapes can also be selected for items such as Magic Brush, Crayon, Texture etc.

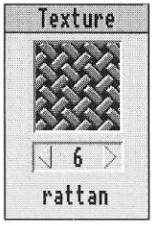
Crayon ▸

This option looks very similar to Texture below. However, when you draw on the canvas the pattern is applied in the current colour except for any black in the crayon pattern which is made transparent.

Frisket - when creating a frisket Crayon draws the pattern into the frisket leaving black as transparent and not part of the frisket.

Texture ▸

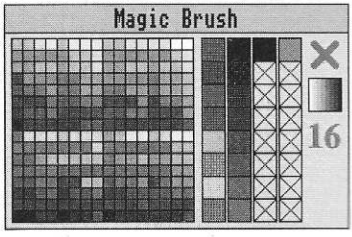
This is a very powerful item. It allows you to choose from a selection of textures such as canvas, pebble, rattan etc. To choose a texture click on the arrows. When you brush over the canvas with a texture the texture is applied to the canvas but without disturbing the colours on the canvas - it is a true texture. The current brush size is used as the template when applying texture.



Frisket - when creating a frisket Texture draws the pattern into the frisket leaving black as transparent and not part of the frisket.

Magic ▸

This is the Magic Brush option first introduced in ProArtisan. It allows you to selectively change one or more colours (up to 16) for any other colour. The first and third columns are the original colour and the second and fourth columns are the new colour that you want them to become.



You can select the colours to be changed in three ways. Firstly you can pick up the colours from the Magic Brush palette and drag them into the left hand column. Secondly, you can click `Select` on the Picker icon (shown as 16) to transfer the colours from the Picker in the Palette menu. Finally, clicking `Select` on the Blend icon will transfer the current Blend set into columns 1 and 3.

There are also three ways to put the new colours in columns 2 and 4. Firstly, drag the colour into the relevant box. If you want to change all the colours to one colour drag the new colour into the destination box whilst holding down `Shift`. Individual replacement colours can be turned off by clicking with `Select` and turned back on again with `Adjust`. Secondly, you can click on the Picker icon with `Adjust` to put the colours from the Picker into columns 2 and 4. Thirdly, you can click with `Adjust` on the Blend icon to transfer the current Blend Set into columns 2 and 4.

To sum up. `Select` on the Picker or Blend icons puts the relevant colours in columns 1 and 3. `Adjust` on the icons puts the colours into columns 2 and 4.

To alter the colours wipe over the canvas. The current brush size and shape is used when wiping the canvas. A global Magic brush is provided in the Process menu.

Frisket - When creating a frisket the colours in columns 1 and 3 are set or cleared depending on whether you select Set Frisket or Clear Frisket in the Palette.

Pattern

This item is a little difficult to imagine. In essence the current sprite is tiled onto the back screen, its size and the number of times it is plotted relate to the original sprite. When you wipe over the screen with your Pattern brush the tiled sprite is revealed. The brush size and shape is governed by the selection in the Brush menu.

Sprites, patterns and ECFs can be dropped into the Sprite Pool and then used as patterns. This replaces the ECFs in the original ProArtisan.

Frisket - This item does not work when creating a frisket.

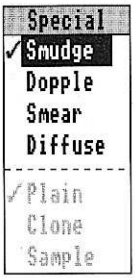
Special ▸

This menu provides some special effects. The features in this menu can be used when the item Special is ticked.

Smudge

The Smudge option softens an image by smudging the colours in a similar way to smudging wet paint. The Clone and Sample options have no effect. The Smudge brush size is taken from the currently selected brush. A small brush size is recommended. The effect is different when Minimise is selected.

Frisket - This item does not work when creating a frisket.



Dopple

Dopple creates a *Pointillist* effect by painting in a manner that looks as if the tip of a brush has been dabbed onto the canvas. The Clone option constantly reads the area under the brush and writes it back in a different pattern of dots. The Sample option uses the current Picker colours. The current brush size is ignored.

Frisket - this item works in a similar way when creating a frisket.

Smear

Smear allows you to *drag out* a colour. The program graduates the colours as you drag the colour out. The best analogy is like using a wet brush to smear watercolour paints. If you are working on grey scales it is like using your thumb to rub over a charcoal drawing. Try creating a block of black next to a block of white and smear from black to white and then white to black. Clone and Sample have no effect. A small brush size is recommended.

Frisket - This item does not work when creating a frisket.

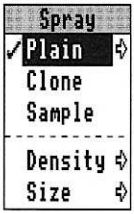
Diffuse

Diffuse breaks up the area that you brush over. In Plain mode it's like painting with a small brush. In Clone mode the area under the brush is constantly read and then written back to the brush in a different pattern thus breaking up areas. In Sample mode the diffuse pattern uses the current Picker colours. The current brush size is ignored.

Frisket - This item does not work when creating a frisket.

Spray ▸

This item leads to the Spray menu.



Plain ▸

The Plain item has a further sub menu allowing you to select either Weighted or Unweighted options. This means that the spray is weighted towards the centre of the spray or not. The Plain spray uses the current colour and opacity.

Frisket - If creating a frisket this tool sprays into the frisket.

Clone

This item enables you to copy one part of the screen to another. To select the source for the cloned area click on the canvas with `Adjust`. When you spray, the image, starting at your selected point, is used as the spray pattern. To start from a new point use `Adjust` again and then carry on spraying.

Frisket - This item does not work when creating a frisket.

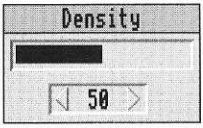
Sample

This item uses the colours shown in the Picker. These are then used randomly when spraying.

Frisket - This item does not work when creating a frisket.

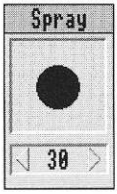
Density ▸

This item leads to a box which enables you to set the density of the spray, either by dragging the slider or by altering the numeric parameter using the bump arrows.



Size ▸

This item lets you set the size of the spray numerically, using the bump arrows or by dragging out the circle.



Fill ▸

This item leads to the fill menu.

Plain

With this item selected the fill is a simple fill that replaces all connected pixels, that are the same colour as the pixel that you click on, with the current colour. Click with `Select` on the canvas to start the fill.

Frisket - This item also works when creating a frisket.

Circular

This item provides a circular fill. If the bottom item in the menu, Dither, is unticked then you get a stepped fill but if it is ticked you get a dithered graduated fill. In both cases the fill uses the current Blend set as defined in the Blends menu described on page 32.

A circular fill can be done into any shape, it just means that the fill is calculated in a circular pattern which radiates from the central point. To initiate a fill hold down `Select` at the point that you want to be the centre and drag out the line before releasing `Select`. The further you drag the line, the wider the bands of each colour will be. A small line means small bands with the final colour filling any area left to fill. Once you try it you will see how easy it is. Note that the arrow head does not have to stay within the region to be filled.

Frisket - This item does not work when creating a frisket.

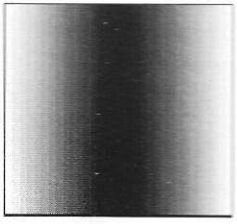
Angled

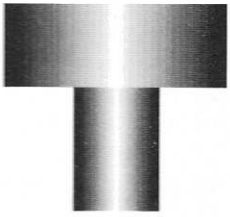
The Angled fill is similar to the Circular fill except that the bands are diagonal instead of circular. This fill accommodates all angles including horizontal and vertical fills.

Frisket - This item does not work when creating a frisket.

3-D

The 3-D fill uses the current Blend set. The area to be filled is taken from the point on which you clicked and the fill works out from the centre of each horizontal line segment within the area. It uses all colours in the blend set on each side of the centre point. See examples below. The Dither option can be applied to this fill if required.





Frisket - This item does not work when creating a frisket.

Spritestretch

This fill takes the current sprite and fills an area with the sprite, stretching or compressing the sprite as required. Click on a point to start the fill. Dither has no effect on this item.

Frisket - This item does not work when creating a frisket.

Dither

This option lets you choose whether a fill is dithered (the illusion of more colours to make a fill look smoother) or stepped. A stepped fill has distinct bands of each colour.

Frisket - This item does not work when creating a frisket.

Pencil ▸

The Pencil is similar to the brush option except that with pencil you never get any gaps, the drawing will always catch up to the pointer. You can alter the size of the pencil by dragging out the circle or using the arrows. Pencil uses the current colour but not the opacity.

Frisket - this item works in a similar way when creating a frisket.

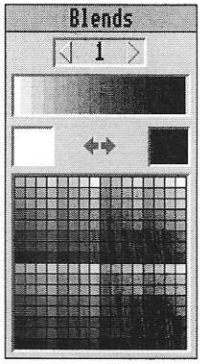
Inkpen ▸

The Inkpen can be used as a calligraphic tool. When painting with it the pen starts off small and while you drag a line out it gets larger over a short period of time. Try it ! The size is adjusted as for the pencil above and the current colour is used. Great for Chinese writing !

Frisket - this item works in a similar way when creating a frisket.

Blends ▸

This item is again very powerful, even more so if you have a Wild Vision/ Computer Concepts or State Machine colour card fitted.



The small box at the top with arrows either side can be used to toggle through the default Blends provided. You can also create your own blends by dragging a colour from the palette into the boxes on the left and right of the arrows icon. Drag one colour into the left box and one into the right box and you automatically get the maximum number of colours available for a blend between the two colours.

On a machine with a fixed 256 colour palette the resulting blend depends upon how many colours are available between the two defined colours and the number of colours is fixed.

On machines capable of having any 256 colours in the palette eg those fitted with colour cards, you could have 256 shades or colours in the blend set. For these machines the Palette option in the Input/Output menu allows you to redefine the colours and create your own blends with up to 256 shades.

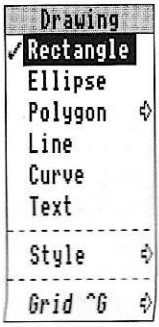
You can also alter the direction of the blend by clicking on the arrows icon between the two boxes. For example if you had a blend that was black to white you can click on the arrow to change it into white to black.

Draw mode

Click on this icon to enter Draw mode and then press Menu with the pointer on the canvas. This brings up the Draw menu which deals with all drawing associated with geometric shapes such as lines, rectangles and polygons. It also contains the text menu. The items in this menu use the Draw module resident in ROM and so the manipulation of the objects will be familiar if you use Draw.

All the items in this menu are drawn in the current colour, which can be changed using the Palette menu. Colour opacity is not implemented in these options.

Frisket - all the Draw items can be used to draw in the frisket. You select either Set Frisket or Unset Frisket from the Palette when in Create Frisket mode. For example an outline rectangle with no fill will clear an outline rectangle or set an outline rectangle in the frisket depending upon which of the two colours is chosen in the palette. This control is further enhanced with stroked and filled shapes.



Rectangle

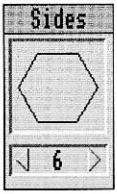
To place a rectangle position the first point by pressing Select and *drag out* the rectangle to the required size before releasing Select to fix it. The rectangle is drawn in the current colour and takes account of the Style setting discussed on page 36.

Ellipse

The ellipse is placed in the same way as the rectangle above.

Polygon ▸

The polygon item has a sub menu where you can select the shape of your polygon.



Use the arrows to select from 3 to 32 sides and place the polygon by clicking `Select` to define its centre and drag out to define its size and orientation. Use a 32 sided polygon to create circles.

Line

Lines and Curves generate paths. When the path is complete they are stroked, filled or stroked and filled depending upon the settings in the Style sub menu. **Stroked** means that the line is drawn using the line thickness set in the Style sub menu. **Filled** means just that, the area inside a closed path is filled. **Filled** and **Stroked** is only noticeable if you have the Style sub menu set up so that the outline or stroked colour is different to the fill colour (see page 36).

Lines are created by clicking with `Select` to define a start point. From here you can either drag out the line to the end point before pressing `Select` again or just click `Select` at the end point. This second point also forms the start for the next line segment. When you click on another point a line is drawn from the last point to the new point. To complete editing click with `Adjust`. Note that you can either click all points for the line to be drawn between or you can drag out a visible line by holding down Select, whichever you prefer.

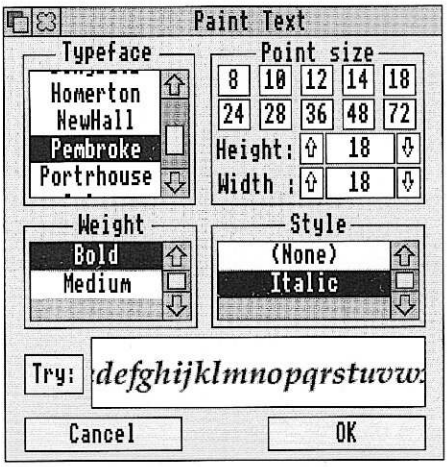
If the Style menu is set to Closed then the last segment of the line is drawn to join up with the first point. In addition if you click a point close to the start point the program automatically takes this as being the last point without the need to press `Adjust`. If Open is selected in the Style menu then the lines finish at the last point and do not join up. This is best seen if you use the Style menu described on page 36 to have a filled shape with a different coloured outline.

Curve

This works in a similar manner to the Line item. Curves are automatically smoothed at joins. For sharp changes in direction place points close to one another or complete a section with `Adjust` and start a new one.

Text

Click on this item to bring up the Text dialogue box.



Typeface

This dialogue box is broken up into five main areas. The top left section allows you to select a font. You can use the arrows to scroll through the fonts available in your !Fonts directory. Click on the one that you require to highlight it. System font cannot currently be used as it is not an outline font.

Point size

The area on the right allows you to set the font size either by clicking on one of the sizes provided or by entering in your own requirements in the Height and Width boxes.

Weight

In this section you can select from Bold or Medium, if available.

Style

This section allows you to select either Italic or None as the styles.

Try

Click on this box to see the effect of your choices. The box to the right is where you enter the text that you want to paste onto the canvas. By default this has the word ProArtisan in it.

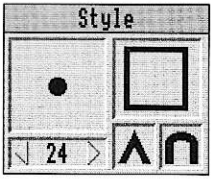
You can now click on OK or Cancel. OK will remove the dialogue box and place the text at the end of your pointer. To paste the text click with `Select` to drop the text in the current colour and opacity. When the text is pasted it cannot be removed as it is now a bit image and in fact it can be accessed from the Sprite pool. To remove text from your pointer press `Menu`.

Clicking on Cancel returns you to the canvas without the text at the pointer.

It should be noted that Text is not designed to provide anti aliased text. If you place text onto a multi coloured background anti aliasing does not work. The text item provided by ProArtisan 2 is written as a sprite with a Frisket around it. This makes it very easy to rotate and scale the sprite based text and also enables you to add various textures and fills to your text. See the **Text** examples in Appendix 1 for clarification.

Style ▸

This dialogue box enables you to define how the drawing objects, except text, will appear.



The thickness of the line is shown as a circle and also numerically. This can be altered using the bump arrows or by dragging out the circle.

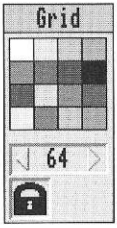
The top right area can be toggled between Stroked, Filled or Stroked and Filled. The graphic changes to reflect the differences. The first two colours in the Picker are used for the stroked and the filled area. If only one colour is in the Picker then black is also used but make sure that black is not the only colour in the Picker.

The icon to the right of the number is used to select whether the joins are Butt, Round or Square. Toggle between the options by clicking on the icon.

Finally the last icon is used to indicate whether the lines and curves should create closed or open objects.

Grid ▸ `Ctrl G`

This item provides an on screen grid to help with positioning. It is not part of your picture it is simply overlaid. The grid is turned on by clicking on the Grid item in the menu.



You can select the colour to be used for the grid so that it is always visible but unobtrusive. You can set the size of the grid from 2 to 256 pixels using the bump arrows.

The icon in the bottom left is a padlock and can be toggled to have Grid Lock on or off. As shown above the grid lock is active. Note that you cannot have Grid Lock active without a Grid on screen.

Blank page

Sprite Mode

Click on this icon to enter Sprite mode and then press Menu with the pointer on the canvas. This brings up the Sprite menu which deals with areas which are cut from the screen or imported into the sprite pool.

A sprite is an area of the screen and it can vary from one pixel to full screen size.

Cut ▸

The Cut item enables you to cut a piece of the canvas for use in other options. It has a sub menu with two items.

Rectangular

This item cuts out a sprite using a rectangle. You click with Select at the start point, drag out the rectangle and release Select to cut the area inside the rectangle. This is automatically pasted into the Sprite pool with the name *Temp*. You can edit the name to whatever you want, except Temp, if you want to retain it for future use. See the Transparency option as well.

Irregular

This item lets you trace around an area by holding down Select whilst tracing. When you release Select the area is pasted to the sprite pool.

Magic Wand ▸

This is an extremely powerful option for automatically cutting out sprites by tracing around a boundary which is defined by closeness of grey scale or colour to the starting pixel colour. When a boundary has been followed everything inside the boundary is transferred to the Sprite Pool. The outcome is that it is possible to click on an object and have it transferred to the sprite pool.

However, there are some limitations and you may have to experiment a little. It is easiest to use on objects with clearly defined borders and experience shows that clicking just inside the right hand edge of the area required produces the best results. This option becomes more predictable with use. Sometimes it may be necessary to slightly alter an image in order to pick up the correct object. For example a circular object with a few missing pixels may not be correctly picked up unless you close the circle by adding a few strategically placed pixels. Slight changes in the start position can have dramatic effects on the results as the colour of the start pixel might be very different.

An easy thing to try it on is some large text placed using the Text option. Also try the examples **Moana** and **LucieBelin** provided in the Appendix 1, Examples.

Frisket - This is the only item in the Sprite menu that works when creating a frisket. All the other items are greyed out.

There are two methods for defining the range of colours or intensities acceptable when comparing pixels for the boundary follow.

Colour ▸

The range of colours acceptable when doing a boundary follow with Magic Wand is defined by dragging out the slider to the required position. The colour range is based on a colour cube model and the range is the offset either way from the start pixel. If you understand about colour cubes then the above will make sense. If you do not then the easiest thing is to play with it.

Greyscale ▸

This option is a little easier to understand as the range relates purely to intensities. Again the offset on either side of the start pixel is defined by the range slider. For example clicking on a black pixel with a very low range setting will cause the Magic Wand to search just for black pixels.

Paint

This item lets you paint using the currently selected sprite. See Sprite pool on page 42 for information on selecting a sprite. This option provides an unlimited number of brushes because you can draw what you want, grab it as a sprite and then use it as a brush.

Fill

The Sprite fill item allows you to fill an area with the current sprite in a similar way as filling with a plain colour except that the sprite fills the area at the size of the original sprite, tiling the sprite to fill the area if required.

Distort

The Sprite distort item is very powerful although extremely simple to use. Again it works with the current sprite. You can band a box on the screen by clicking on a point with `Select` and dragging the box out before releasing it. This leaves a box on screen with four square blocks, one at each corner. If you click `Select` now on the canvas the sprite is plotted at its original size.

To move the box to another position click and drag with `Select` on any of the four blocks. Release `Select` to drop the box at the new position.

To distort the box drag any of the four blocks with `Adjust`. When you have designed the required shape click with `Select` at any point on the canvas.

The clever thing about this item is that the points can cross over each other to create different effects such as a curl at the edge of a page. It is very easy to get perspective effects with this feature.

Rotate

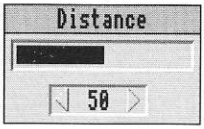
This item enables you to rotate the sprite through any angle. By default the scale of the original sprite is preserved but if you hold down `Shift` you can also alter the scale of the sprite by dragging it out. Keep `Shift` held down until you have fixed the sprite otherwise it will revert to its original size. The centre of rotation is the bottom left of the sprite.

Scale

This item, Scale sprite, lets you scale the current sprite. To do this just click with `Select` to position the bottom left corner of the sprite and drag the sprite to the required size and release `Select`. By default the aspect ratio of the sprite is retained but if you hold down `Shift` you can alter the aspect ratio whilst scaling.

Sphere

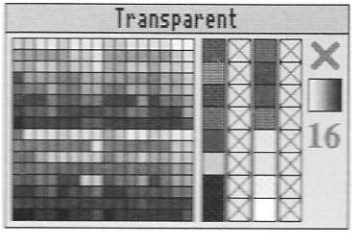
This is yet another very powerful feature that, once understood is simple to use. It allows you to distort the current sprite into a sphere. However, there is a lot more control than this and you can tile the sprite to fill the sphere with more than one sprite.



The Distance parameter governs how many copies of the sprite are pasted onto the surface of the sphere. The size of the sphere does not matter as the program always attempts to paste the same number of sprites irrespective of the size. See Planets in the Appendix 1, Examples for an idea of how to use this feature.

Transparent

This item lets you set colours as transparent when they are included in a sprite that you cut out from the canvas. Like Magic brush you can put the Picker colours from the palette into the Transparent palette by clicking on the Picker icon with `Select`. You can also transfer the current Blend set colours by clicking on the Blend icon. Click on the X icon to remove all transparent colours. You cannot put colours into columns 2 and 4.



Show Sprite Pool

The sprite pool window is always shown on screen when you are in the Sprite menu, unless you click on the close icon. If you do close it or it is obscured you can display it again by clicking on the Sprite icon in the Tool Pane. The Sprite pool window is shown below. The current sprite is shown in the window with its name in the box below, **matt_&_becky**, in this case. The name can be changed at any time by clicking into the box and editing it before pressing `Return`. The

default name used for a sprite when you cut it out is **temp** and if you want to retain the sprite you should rename it otherwise next time you grab a sprite it will be overwritten because the new sprite will default to the name **temp**. Try to make a habit of always naming your sprites - you can always delete them later if you do not want them.

The left and right bump arrows are used to move through the sprite pool if you have more than one sprite.

This icon shows the size, in pixels, of the current sprite.

You can delete a sprite by clicking on the X icon when the sprite is visible. Note that you cannot delete all sprites as there must always be one sprite present.

Click on this icon to flip a sprite horizontally.

Click on this icon to flip a sprite vertically.

This icon indicates the total number of sprites in the pool.

This icon indicates the total memory used by the sprites in the pool.

The black outline box icon indicates that the soft paste option is available. In this mode the slider and associated percentage indicator control the amount of transparency for the whole sprite. A value of 100 means no transparency.

Auto blend

To auto blend the current sprite select the required blend from those shown below and click on the sprite in the sprite pool window. The sprite is attached to your pointer and when you click `Select` the sprite is blended into the canvas using the blend template. The slider and related percentage indicator has no effect as the blends are pre programmed.

The auto blend templates are selected by clicking on the black box in the bottom left of the sprite pool window to show the icons below.

This icon pastes the sprite in with a solid centre feathering out in a circular pattern.

This icon pastes the sprite in with a solid centre feathering out in a rectangular pattern.

This icon fades the sprite from left to right.

This icon fades the sprite from right to left.

This icon fades the sprite from the centre to the right edge. In other words the left half is solid and the right half gradually fades.

This is the same as above except from right to left.

This icon fades the sprite from top to bottom.

This one fades the sprite from bottom to top.

This one fades from the centre to the bottom.

This one fades from the centre to the top.

This one is solid in the centre but fades to each side.

This one is solid in the centre but fades to the top and bottom.

All of the above features are extremely powerful and it is worth getting to know how they work.

Loading Sprites

Sprites can be loaded into ProArtisan 2 as full images provided that there is only one sprite in the file. Alternatively they can be loaded into the Sprite Pool by dropping them onto the Sprite Pool window.

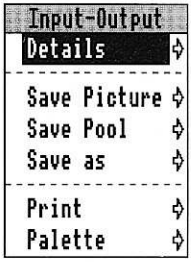
Due to technical restrictions compressed sprite files replace all existing sprites in the pool whereas uncompressed sprite files merge with those already present. So if you want to merge your sprite files you must decompress them first.

If you do merge sprites and the new sprites have the same internal sprite name as one already in the pool then the old one is overwritten.

Blank page

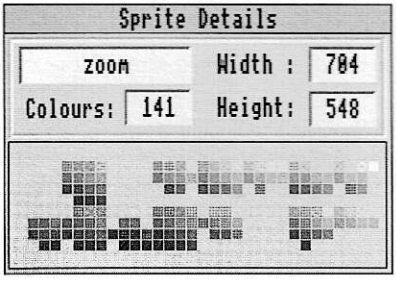
Input/Output mode

This menu deals with all the input and output concerned with ProArtisan 2. This includes disc saving and printing.



Details ▸

This menu analyses the data in a picture. First of all the internal sprite name of the image is shown. To the right of the name is the Width of the image and below that is the Height.



Under the name the number of colours used is displayed and the large box below shows the colours used. If you click with `Adjust` on the colours a histogram is displayed showing how often colours are used in the image.

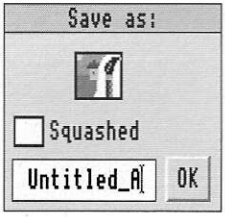
Save Picture ▸

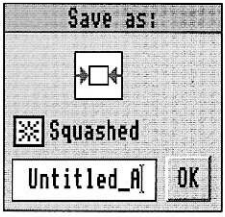
This menu leads to a standard save dialogue. You can enter the name and drag the file to a directory viewer or you can enter a full pathname and click on OK. If the Squashed box is ticked in the Save box then the file is saved in a compressed format called *Squash*. Squash is supplied with all RISC OS 3 machines and is supplied with ProArtisan 2 for RISC OS 2 machines.

Squash files can be reloaded into ProArtisan 2 by dropping them on to the canvas. If the file is not a sprite or Draw file then ProArtisan 2 ignores it.

Squash is an efficient compression tool for any file but it does not allow you to specify a file type. This means that you must have a little discipline when saving compressed files. It is advised that you store all ProArtisan 2 pictures in a directory called ProPics or similar. ProArtisan 2 will not crash if incompatible squashed files are dropped on to the canvas, it will just ignore them.

The save dialogue will look as below depending whether the Squashed option in the save dialogue is ticked or not.





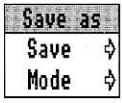
Save Pool ▸

This option is as for Save Picture except that it saves the contents of the Sprite pool. The pool can be squashed or not. These files can be restored to the sprite pool by dragging them from a filer to the Sprite Pool window. Due to technical restrictions compressed sprite files replace all existing sprites in the pool whereas uncompressed sprite files merge with those already present. So if you want to merge your sprite files you must decompress them first.

On RISC OS 3 machines *Squashed files* can be unsquashed by running the !Squash application and dragging the files onto the !Squash icon. You then select the Unsquash option to convert the file - provided there is enough space on your disc for the unsquashed file. Alternatively you can double click on the squashed file once !Squash has been run to convert the squashed file into a standard sprite file.

Save as ▸

This item leads to a sub menu with two entries.

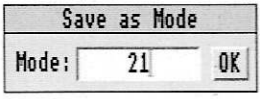


Save ▸

This item leads to a further save box which is used to save in the same way as described above except that the Mode item below allows you to specify which mode the image is saved in.

Mode ▸

This item leads to a writable icon into which you can enter a mode number. Click on OK to confirm the choice. An error is generated if the mode is not known to the system. When you save an image using Save as ▸ Save the image is converted to the specified mode and saved in that mode. Note that if your image is not screen sized, eg A4, the resulting image has the same dimensions but it takes on the resolution and colour characteristics of the new mode.



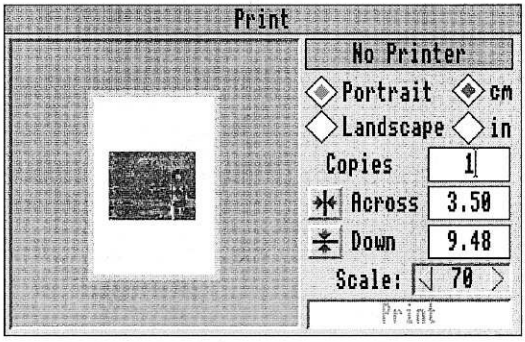
Warning: This facility is provided for those wishing to produce an image for a particular mode and should only be used on the final image. If you edit the image later you may find that you have lost colours, resolution or both.

Print ▸

This item leads to the Print dialogue box which presents a novel approach to printing.

The area to the left represents the possible printing area and the white area within it represents the paper. The slightly lighter grey around the white area is the printer margin. These values are derived from the printer driver. If no printer driver is present then an A4 page with 10mm margins is assumed.

You can drag the canvas image around on the paper to position it where required.



The right side of the dialogue box has several controls. First the panel at the top tells you which printer driver is loaded. You can also toggle between Portrait (upright) or Landscape (sideways). The selection is reflected in the white area.

Next you can select to have the measurements below in centimetres or inches.

The box below this enables you to enter how many copies of an image you want printed.

The writable icons below this are the X (across) and Y (down) position of your picture relative to the bottom left corner of the paper. This means that if you placed your picture so that its bottom left corner was in the bottom left corner of the paper then your picture would be at position 0,0.

You can click on this icon to centre the picture horizontally on the page.

You can click on this icon to centre the picture vertically on the page.

You can also scale the image using the Print Scale option to set a percentage scale.

Finally there is the Print button. Click on this to print your picture, assuming that you have a printer connected and on line.

Palette ▸

This item is only relevant if you have a colour card fitted and on RISC OS 2 this menu is greyed out. At the time of writing the cards supported are the Wild Vision/ Computer Concepts card and the State Machine series. Any card that is compatible with these should also work with ProArtisan 2.

The Palette item enables you to edit the 256 colours used, even without a colour card fitted. However, without a card you cannot see anything except the colours defined in the desktop. You can rearrange the palette order if you wish to using this facility but we advise not changing the palette unless you have a colour card fitted. You normally create the colours before starting work in much the same way as an artist selects which colours he intends to use and places them on his palette. Clicking on OK makes the selection of colours the current palette and any image that you have loaded will be changed.

If you have a colour card fitted selecting the 'S', for Screen, icon will change the desktop colours to the same as your palette. In addition if the Screen icon is selected any new images loaded automatically have their palette read and the desktop palette is altered to use the new colours. Obviously if ProArtisan 2 is running in a mode not supported by your hardware or one of 16 colours or less then nothing will happen.

In order to visibly change the palette you must have a colour card or equivalent fitted and also be in a 256 colour mode supported by the colour card.

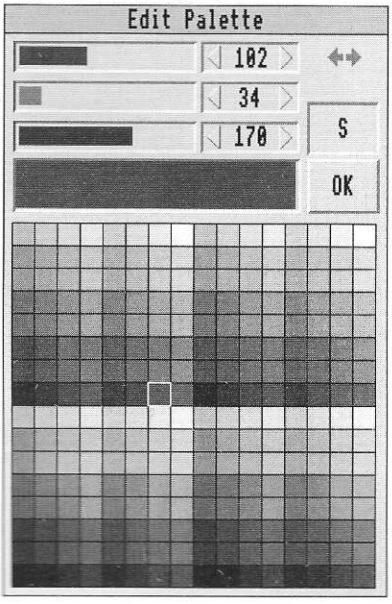
If you load a sprite that has an arbitrary 8 bit (256 colour) palette the desktop colours will initially be different. This is because the desktop palette will be set to the default 256 colours normally used by the computer. These are not normally changeable unless you have a colour card. To set the correct colours enter the palette dialogue box and click on the OK button. ProArtisan 2 then reads the colours from the new sprite and sets the palette accordingly.

Colour editing

The palette enables you to edit a colour if you have a colour card fitted provided that the S for **Screen** icon is selected. Click on the colour that you want to edit and it is shown in the box at the top of the dialogue window. The sliders to the left of the box show how the colour is formed from its red, green and blue components. To alter a colour drag these sliders until the required colour is achieved. To confirm a colour and palette click on OK. The sliders range from 0 to 255 and if all sliders are set to zero then the colour is black. If they are all set to 255 the colour is white.

Palette editing

With a colour card you can define your own palette of 256 colours provided that the S for **Screen** icon is selected. You can either edit each colour individually as described above or you can alter them in sets. The largest set that you can create is one of 256 colours. For example you can create a set from Black to White by clicking on the white in the top right corner of the palette and dragging down to the black at the bottom left. This identifies the two colours that you want to create the palette between and how many colours you want in between, 254 in this case. If you now click on the Blend arrows in the top right corner of the palette you will get a grey scale consisting of 256 greys. If you do a fill with this it is very impressive as even at 800% magnification you cannot see the pixels.



If you do not want to blend all the colours you can just drag over a range, say from yellow to blue, and when you click on the Blend arrows the program will create a blend between these two colours. In this way you can define sections of the palette as blends very easily. This range also then becomes available in the fill option because the fill will use as many colours in a blend as it can find to fit the blend definition.

Another thing that you might want to do is have a large blend of red, for example. You can do this by defining a start colour as red using the sliders and then also an end colour in the same way. You control how many steps there will be between the

colours by the number of colour cells between the start and end colour in the palette. When you click on OK the palette is changed to reflect your new requirements. If you had put the reds at each end of the palette instead of black and white you can have 256 shades of red.

It is possible to obtain all of these shades because you are picking the colours from 16.7 million colours, although you can currently only have 256 of them at any one time.

It is possible to load images created with an arbitrary 256 colour palette into a machine without a colour card fitted and ProArtisan 2 will make the best approximation that it can, given the standard palette.

Note: In all cases, whether a colour card is fitted or not, the palette is taken from the last image loaded. If other images have a different palette that you want to restore then you must reload the image or load in a previously saved 256 colour palette file such as the ones used by FlipTop which is supplied with the Wild Vision/CC colour card. Alternatively you can load a sprite into Paint and save a palette file from there.

Importing files

ProArtisan 2 can accept files from several sources but the two most common are **Sprite** and **Draw** files. Most applications will allow you to save an image in one of these formats.

Sprites

Sprites are loaded onto the canvas by dragging them onto the ProArtisan 2 icon on the Icon Bar or by dropping them into an already visible canvas. In the latter case the new image replaces whatever was on the canvas. Sprites can be in normal unsquashed format or squashed using the Acorn Squash utility.

Sprites, either single or multiple images in one file, can also be loaded into the Sprite Pool by dropping their icon onto the Sprite Pool window. Again, sprites can be in normal unsquashed format or squashed using the Acorn Squash utility. If the sprites loaded into the Sprite Pool are squashed then they replace any sprites already in the Sprite Pool. If the sprites are not squashed then the new sprites are merged with the existing Sprite Pool.

Draw

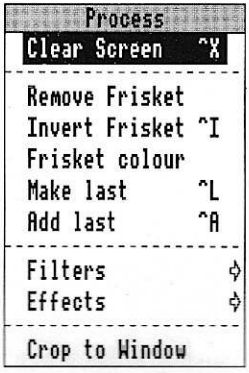
Draw files can be loaded into ProArtisan by dragging the Draw file to the bottom left corner of the canvas. The Draw file is converted into a sprite and positioned with the bottom left edge of the bounding box that surrounds the Draw file at the pointer position. If you want to position the Draw file accurately you are best to take it into a blank canvas first and cut it out as a sprite. You can then place it on your working canvas and manipulate it in the same way as any sprite using transparency, rotation, scaling etc.

9. The Process Menu

Process mode

This menu provides the interface to the image processing section of ProArtisan 2 and also to the very powerful Frisket facilities. The Filters and Effects are described in functional terms in this chapter but in Appendix 1, Examples we provide some easy to use examples that illustrate the use of many of these items.

The real power of the Filters and Effects is that they can be selectively applied to any discrete area of the canvas by using a frisket.



Clear Screen `Ctrl X`

Click on this menu item to clear the canvas to the current colour selected from the palette. Alternatively use `Ctrl X` at any time the program has the input focus.

Frisket - when creating a frisket this option sets or unsets the frisket depending upon which colour is chosen in the palette.

Defining a Frisket

Before moving on to the next five items you need to understand what a frisket is. A frisket is used to protect an area of the canvas from change. You can then work on the canvas painting or manipulating anywhere except the area that has been protected with the frisket. With the Invert Frisket option you can reverse the frisket so that you can only paint or work on the area originally defined by the frisket. See page 21 for more explanation on a frisket.

Warning: A frisket requires additional memory equivalent to the size of your canvas. Once you toggle the Frisket Icon a frisket is created. If you do not need the frisket and want to recover the memory use Process ▸Remove Frisket.

The Frisket icon has three states:

Frisket Inactive

In this state the frisket does nothing and working on your canvas is as you would expect - everything you see is what you get.

Frisket Active

In this state the frisket is active and the area defined by the frisket is protected from change. Whatever action you perform on the canvas does not affect the protected area - even Clear Screen.

For example, make sure that you are in Frisket Inactive mode and select the large brush in the Paint menu. Now paint some squiggles onto a blank canvas using any colour. Now click on Make Last in the Process menu, the squiggles are now taken as the frisket, replacing any existing frisket.

If you now toggle the Frisket icon to Frisket Active and try to paint on the frisket (your squiggles) you will see that you cannot, you can only paint onto the rest of the canvas.

If you click on Invert Frisket you will now be able to draw on the area defined by the squiggles but not anywhere else.

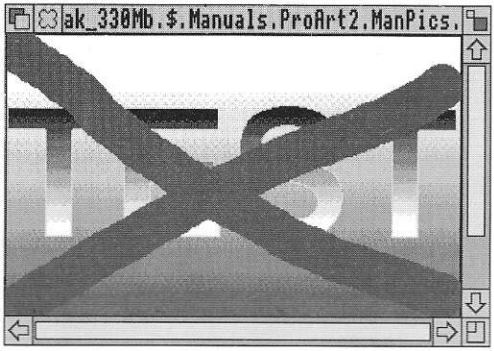
Create Frisket

In this state you can create a frisket directly onto the canvas using many of the standard tools. Note that Undo is not functional in this mode. The palette will only show two colours; crosshatch (white), which means that you are unsetting or 'clearing', the frisket. This can be used to erase parts of the frisket. The other colour (usually red) is used to create the frisket. By default the Create Frisket colour is red but this can be altered in the Process menu if your canvas contains a lot of red which might then be visually confusing.

You can use Create Frisket instead of using the Make Last and Add Last items in the Process menu. For example you could plot a rectangle onto the canvas in this mode and it would appear as a red rectangle. When you toggle the Frisket icon to Frisket Active the red rectangle is no longer visible but if you try to draw onto the canvas the area covered by the rectangle is protected eg;

Load the file **Outline** into ProArtisan 2 and set the Frisket icon to Create Frisket. Bring up the palette dialogue, which only has two colours, and click on red. Now

use a large brush to paint a large red X over the canvas. Toggle the Frisket icon to Frisket Active, select a colour from the palette and try to paint on the canvas. The new colour is only painted on areas **NOT** covered by the Frisket. Clear your painting by clicking on Undo and then click on Invert Frisket and try the same thing. This time you can only paint **ONTO** the area defined by the Frisket.



X marks the frisket ! With Frisket Active *you cannot paint on the area defined by the X - even though you cannot see it.*

The frisket is a tool, it does not alter the saved or printed image. The tutorials given in Appendix 1, Examples will introduce some more powerful concepts of using the frisket.

Remove Frisket

Clicking on this item removes the current frisket and recovers the memory used by it. A frisket requires the same amount of memory as your current canvas and so doubles the memory requirement. On machines with less than 4 megabyte of RAM you will be unable to use the frisket except on a canvas with a maximum size of half a screen.

Invert Frisket `Ctrl I`

Clicking on the icon, or pressing `Ctrl I`, inverts the frisket so that an area that is protected by the frisket becomes the area that can be worked on and vice versa.

Frisket Colour

Clicking on this icon sets the frisket colour to the current colour. This lets you set the frisket colour so that it is easily distinguished from the colours in the canvas.

Make Last `Ctrl L`

Click on this icon to make your last action the frisket. This applies to almost any action. For example, if you had filled an area then the filled area becomes the frisket when you select Make Last. Other useful friskets can be created after using Magic Brush to change colours selectively and then making the changed colours the frisket. You can even undo the last action after you have made it the frisket.

ProArtisan 2 has a a one step Undo feature, documented elsewhere, which allows you to delete operations and restore the previous screen. This 'back screen' is what is used in the Make Last and Add Last items. When you click on either of these items the program compares the 'back screen' with the canvas and any changes or additions to the canvas that do not appear on the 'back screen' are used to form the frisket. However, because you still have the 'back screen' you can choose to Undo the changes and revert to your previous canvas. The key thing to remember is that the changed areas are now stored in the frisket and can be used to protect areas on the canvas.

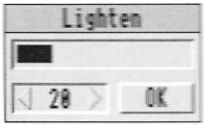
For example, you can achieve the same effect as shown previously by having Frisket Inactive and painting the X onto the canvas. Next press `Ctrl L` to make your last action (painting the X) into the frisket. Now click on Undo to remove the X and toggle the Frisket icon to Frisket Active You now have exactly the same effect as before. In some instances it is easier to use this method instead of Create Frisket directly - particularly if you wanted to create a frisket but had forgotten to turn it on.

Add Last `Ctrl A`

This is similar to Make Last above except that the frisket defined by the last action is added to any frisket that already exists, allowing you to build up a complex frisket.

Filters & Effects

Many of the entries in the Filters and Effects menus use a common slider box to set a percentage value. One box is described here to avoid duplication.

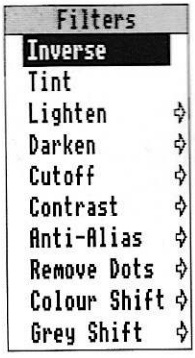


The slider can be altered either by dragging the black bar or by clicking on the

bump arrows. The current value is shown between the bump arrows. The significance of the value is explained in each item. Click on OK to confirm the value and initiate the action. If you want to carry out repetitive operations use Adjust to click on the OK button. In this case the effects are not cumulative as each click applies the effect to the 'back screen', which hasn't changed because the changes have not been confirmed. This enables you to fine tune the effects to achieve the required effect. For example a lighten by 20% might not be quite enough so you can then try 25% to see if that is better.

Filters ▸

This sub menu and the next contains a wealth of exciting options which are extremely versatile, particularly when used in conjunction with the Frisket or other Filters and Effects. The best way to appreciate these filters is to try them out on an image. You can use the same image in each case and then use the Undo option before moving on to the next filter. Be warned that some of the filters are processing massive amounts of data and so they may take a little while to complete but the effects are worth waiting for. On the more complex filters you can press Escape to abandon an operation and preview the effect as far as it has reached. The filters work horizontally down the screen. You can then use the Undo option and repeat the effect or alter the parameters in the knowledge that the effect will be what you require and thus worth waiting for.



You may like to use a small image for trying out some of these filters.

Inverse

Clicking on this item inverts the canvas colours logically, providing a colour negative effect. The canvas is still in colour. Technically the effect is NOT RGB and is created from the following formula - (255 - RED) + (255 - GREEN) + (255 - BLUE)

Tint

Click on this item to remove all colour from the canvas and turn the image into a tinted image using the current blend set. If the blend set is the grey scale then you will get a monochrome effect. Other sets will provide different tints. For example Blend set 2 gives a sepia effect. Watch out for Blend sets that have been destroyed by loading in sprites with arbitrary 256 colour palettes.

Lighten ▸

This option has a sub menu, shown on the previous page, which lets you set the amount that a picture is lightened by adding a percentage to the grey level values of the current pixels. A value of 100 gives a totally white screen. Click on OK to lighten the image. Remember that you can use `Adjust` to try successive changes.

Darken ▸

This item is the opposite of lighten and the slider lets you set the amount by which a picture is darkened. A value of 100 gives a totally black screen. Once the value is set click on the menu entry to darken the image.

Cutoff ▸

This item enables you to posterise the image. It changes the image to just two colours. The slider determines at which intensity the switch from one colour to the other takes place. The two colours used are those at either end of the current Blend set. The default Blend set is black to white and thus default action will use black and white. A value of 5 on the slider gives a totally black image with Blend set 1. A value of 100 results in a totally white canvas with Blend set 1.

Frisket - this item works in a similar way when creating a frisket. It is the only item in the Filters menu that works when creating a Frisket.

Contrast ▸

This item applies contrast to the image. Contrast is the balance between light and dark. The larger the value the greater the contrast.

Anti-Alias

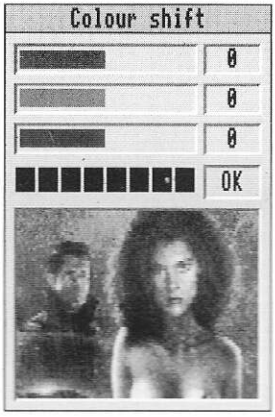
This item softens the image by blurring the edges so that objects merge into each other. The slider determines the accuracy of the colour selection method used but at the expense of speed. In most cases the default setting will provide good results in a fast time but some palettes require more accuracy and are slower as a result. The higher the accuracy value the longer the process takes. The setting of this slider also affects the Sprite Soft paste options and some of the Generic filters.

Remove Dots ▸

This item is of most use on scanned or digitised images. Its purpose is to remove isolated dots in the image. The slider controls the target dot size. Large clusters of dots are anti-aliased, single dots are removed and replaced by their surrounding colour.

Colour Shift ▸

This item enables you to alter the colour balance in an image. A small preview window shows the effect of the colour shift on the image. The canvas is not altered until you click on OK.



The sliders in this window are Red, Green and Blue (RGB). They range from -128 on the left and 128 on the right with a mid point of zero. If you raise the red slider up towards 128 the image gets progressively more red because the red component is being intensified. Moving the slider to the left towards -128 progressively removes the red component and at -128 almost all the red is removed from the image. You cannot see the effect of the change until you release the slider. Remember, the canvas is not altered until you click on OK but you can preview the change in the small Preview window.

Exactly the same applies for the other sliders except that they control the green and blue components.

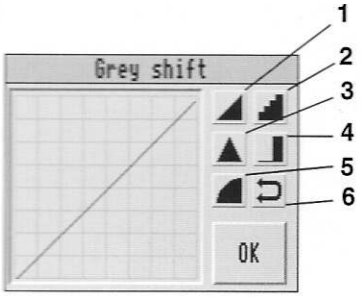
The row of blocks to the left of the OK button enable you to *lock out* areas of differing intensity. A block is selected when it is solid. If you only have one block on the left selected then the colour shift only applies to the darkest colours. If you add the next block then all colours up to that intensity are affected. You can have

individual blocks selected so that you only affect one band of intensity. The block at the far right selects only the brightest intensities. You can apply a Colour Shift and then toggle the intensity blocks to see the effect that they have.

Grey Shift ▸

This item first converts the image to a grey scale using standard algorithms and then processes the grey scale according to the gradient slope defined by the line in the dialogue window. On computers without a colour card the number of visible greys is 16 but on a colour card machine this can be up to 256 greys.

The source grey scale lies on the horizontal axis and the resulting grey scale lies on the vertical axis. Black for each axis is in the bottom left corner. This all sounds very technical but as it is easy to try it you are best doing so and noting the effects.



When used on images that are originally colour, the number of resultant greys depends upon the colour distribution in the original image. If you are trying to understand this filter you are best using the supplied image called **Greys** as the results with a grey scale image are much more predictable.

The icons in the window are numbered above and their function is detailed below.

1) Standard - The default line of a 45 degree slope leaves all the greys as they were. This is because all of the greys represented in each square on the horizontal axis are mapped to the corresponding square on the vertical axis.

2) Posterise - This reduces the image to 5 colours 0, 25, 50, 75 and 100 % black signified by the five steps.

3) Solarise at 50% - All the colours from black to mid grey are mapped to a brighter grey (except for black which stays the same) with mid grey converting to white. The line then goes down so mid grey becomes white and as you move further towards white in the original the greys become darker ending up with white on the original becoming black. Try it on the **Greys** image and re read the above.

4) Posterise at 50% using 2 colours. This has the effect of reducing the **Grey** file to just two colours, black and white. All colours from black to mid grey are converted to black because there is no vertical component and all colours from mid grey to white are converted to white because the horizontal line is at the top of the vertical axis. This is the same as the Cutoff filter.

5) Mid range boost - This has the effect of keeping black and white constant but brightening all the greys in between .

6) Invert - This reverses the effect of any gradient already defined. As well as the supplied gradients you can draw your own into the grid by altering one of those already there.

Grey Shift is useful for processing images that are to be printed in monochrome and is also very useful for manipulating 256 grey level sprites. You can for example boost some areas and reduce the effect of others.

Effects ▸

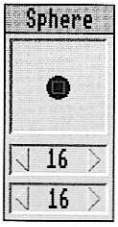
This menu provides lots of special effects that can be applied to the canvas.

Emboss

This effect is quite amazing. It uses the current Blend set to create an *embossed* image on the canvas. Initially you should try it with the grey scale blends, set one. This feature can be used to make some interesting backdrops for your desktop.

Sphere ▸

This item wraps the whole canvas onto an imaginary sphere.



The first parameter controls the size of the sphere used and the second controls the distance your imaginary viewpoint is away from the sphere. These are represented by the sphere and square respectively.

Find Edges ▸

This item uses the familiar drag box to set a value. When you click on OK this item attempts to find any edges that occur in the image. The value of the drag box controls the width of the edge on the resulting image.

Facet

This item replaces each colour by the most common colour in its vicinity based on a 3 by 3 grid. Try it and see.

Halftone ▸

This item creates a fractal halftone which gives a more natural mezzotint type diffusion that avoids patterning normally associated with half toning. The drag box controls the cluster size around which the fractal is based. A halftone consists purely of two colours. Normally the two colours are black and white which gives the appearance of grey scales. This effect uses the first and last colour in the currently selected blend set so to achieve black and white use Blend set 1.

When used in conjunction with the frisket you can use Halftone to add random 'noise' to areas of the canvas before further processing. For example a Halftone followed by an Emboss gives new textures.

Magic

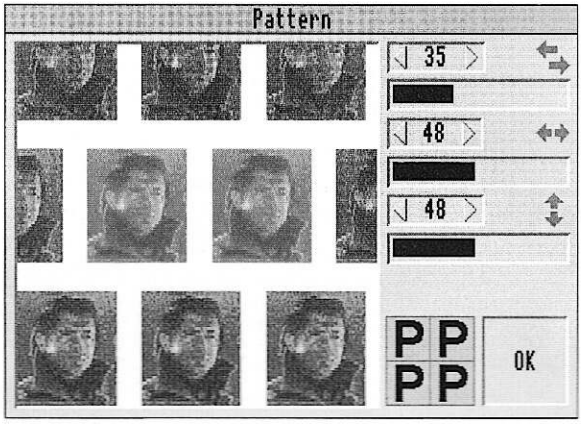
This item applies the settings in the Magic Brush dialogue in the Painting menu to the whole canvas. See page 24

Sharpen

Clicking on this item applies a sharpen filter to the image which sharpens up the edges and makes them *harder*. It is similar to the Emboss item but enhances the colours present rather than using the current blend set.

Pattern ▸

This item leads to a Pattern dialogue window.



The large area shows the current sprite. Depending upon the size of the sprite you will see part of it or the sprite repeated a number of times. This dialogue only has relevance if the sprite is repeated.

To alter a value drag the sliders or click on the bump arrows. The sliders and bump arrows from top to bottom are:

Horizontal offset - which slides the repeated patterns horizontally to provide an offset between rows of the sprite.

Horizontal displacement - which opens up the horizontal gap between the sprite tiles. The white area will be transparent and show the canvas through it.

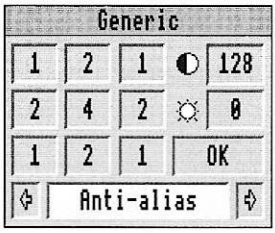
Vertical displacement - which opens up the vertical gap between the sprite tiles. The white area will be transparent and show the canvas through it.

Sprite orientation - the four **P** icons can be clicked on to alter the orientation of the relevant sprite tiles in the pattern. The sprite that is flipped depends upon the size of the original sprite. Clicking on the top left P icon will always flip the sprite to the right of the one flipped by the top left icon.

To apply the pattern to the canvas click on the OK button.

Generic ▸

This item leads to a sub menu dialogue window that has thousands of possible combinations for designing your own filters.



A number of pre-defined filters are provided by clicking on the bump arrows to move through the list. You can either modify an existing filter, which have meaningful names, or go to the last filter titled **Null/User** and alter that one. The latter action is preferred as any changes to the existing filters remain in force until the program is run again.

The two icons above the OK box provide **Contrast** and **Brightness** settings. The nominal base, or neutral position, for these is 128 for contrast and 0 for brightness.

Filter Design

This is a slightly more technical description of what the Generic Filter is and what it does. Most of the filters supplied in the Filters menu can also be created using the Generic option. The filter is applied to every pixel in an image and the current pixel being processed is always at the centre of the matrix.

The 3 by 3 matrix allows you to set weighting values that are applied to the pixel in the centre of the grid. Taking the example of the filter shown in the dialogue box above, the resulting pixel is made up of 4 units from the central pixel, 1 unit from each of the corners and two units from the centre pixels of each side. This then anti-aliases the image because the pixel retains more of the centre or original pixel than any others but is influenced by the other pixels to varying degrees. The following matrix sharpens an image by making the pixel 'stronger' than those surrounding it:

```
 0 -1  0
-1  5 -1
 0 -1  0
```

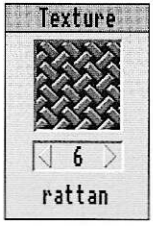
All that we can suggest with this item is to experiment, but do keep a note of any particularly nice filters that you discover as you may want them in future. We would also be pleased to hear of useful filters.

Block ▸

This item converts an image into blocks by converting individual pixels into larger blocks. It gives the same effect as is seen on TV to hide a person's identity. It also brings back memories of graphics on the BBC micro. The slider controls the size of the block.

Texture ▸

This item is similar to the Texture option in the Paint menu, see page 25. Instead of having to paint an area the texture is applied to the whole screen. Textures are selected from the sub menu dialogue.



Crop to Window

This item performs a crop on the canvas. This means that areas are removed from the image to reduce the canvas to the size shown in the window. To perform a Crop scale the main window so that the portion that you want to retain is shown in the window and then click on Crop to Window. Note that you cannot retrieve areas thrown away by cropping so it may be sensible to save the whole image first as a safeguard.

This facility has many uses including the cropping of scans to leave the required area.

Blank page

10. Appendix 1 - Quick Examples

This appendix contains lots of short examples which illustrate some of the effects possible with ProArtisan 2. This is in no way a comprehensive list but we hope that the examples will trigger off other ideas that you can try yourself. One of the aims of these examples is to get you to understand that the features in ProArtisan 2 can be mixed in an unlimited number of combinations to achieve lots of effects. Each new example assumes that the program is in its default state and particularly that the Frisket icon is set to Frisket Inactive.

The examples are deliberately kept short and terse to encourage you to try them out. In some cases starter files are provided and in these cases you will be told to load the file eg **Invert1**. In some cases a file showing the expected result is also provided and this always has the designation 2 at the end of the filename eg **Invert2**.

Invert

Load the image **Invert1**. Use the Text option to enter word CAT in Homerton font at 96 point and place the text across the cat's face. Click on Process ▸ Make Last and then click on Undo. Click on Process ▸ Invert Frisket and toggle the Frisket icon to Frisket Active. Now click on Process ▸ Filters ▸ Inverse. This shows how text can be created with similar patterns to the object it is over but with different colours.

A similar effect can be obtained using Grey Shift with an inverted curve instead of the Inverse filter. More subtle effects can be generated with Lighten and Darken.

Outline

Use a blank white canvas and place the word TEXT on screen in 96pt Homerton font using any colour except white. Use Process ▸ Effects ▸ Find Edges with a value of 10 to convert the text to an outline. Now use dithered fills with various Blend Sets to fill inside text and also the background.

Shaded

Use blank white canvas and place the word TEXT, in black, on screen in 96pt Homerton font. Click Process ▸ Make Last. Select white from the palette and click on Process ▸ Clear Screen. Do a circular dithered fill over the whole canvas. Set Frisket icon to Frisket Active and select a background colour eg blue. Now use Process ▸ Clear Screen and the text appears shaded because you have protected the filled area under the frisket.

Texta

Use a blank white canvas and place the word TEXT, in red, on screen in 96pt Homerton font. Circular fill each letter from top left corner using Blend Set 1. Go to the Sprite Pool where your text is also a sprite and click on the sprite to paste it onto the canvas. Place it slightly higher and to the right to give text with a drop shadow.

Textb

Using the image generated in Texta use Paint ▸ Fill ▸ Plain to fill the first letter in yellow, then click on Process ▸ Add Last. Repeat this procedure for each of the remaining letters in turn. Now use Process ▸ Invert Frisket. Set Frisket icon to Frisket Active. Next use Process ▸ Effects ▸ Half Tone set at 50 followed by Process ▸ Effects ▸ Emboss. To invert the dimples use Filters ▸ Inverse.

Cutoff

Whilst you are using Make Frisket only one filter is active - Cutoff. Load **Moana** and turn on Make Frisket. Set Process ▸ Filters ▸ Cutoff to about 40 and click on OK. Now go to Use Frisket and use effects such as Emboss etc.

Colour Shift

This example requires a lot of memory and will not work on a 2 Mb machine. Load **Puddle** picture and select Blend Set 7 as used for the water. Select Magic Brush and click on the blend set icon in the Magic Brush window to transfer the Blend Set into the Magic Brush. Goto Create Frisket and bring up the palette window. Click on the left colour, usually red, to Set Pixels and brush over the puddle, ensuring that it all turns red. Now click on Process ▸ Invert Frisket and goto Frisket Active. Finally use the Process ▸ Filters ▸Colour Shift to alter just the colour balance of the puddle.

Planets

Create a new screen. Load the Frog image into the Sprite Pool by dropping it onto the Sprite Pool window. Use Sprites ▸ Sphere set to 20 and plot a sphere in the top left corner followed by Process ▸ Filters ▸ Darken at about 25. Repeat this process working out from background to foreground.

Sprite Stretch

Load the Frog image into the Sprite Pool by dropping it onto the Sprite Pool window. Clear the canvas and paint some wavy thick black lines down the canvas about 3 inches wide. Select Paint ▸ Fill ▸ Spritestretch and click into the black area to see the sprite fill the area.

Moana

Load the file called **Moana** and toggle the Frisket icon to Make Frisket. Use Sprite ▸ Magic Wand at the default setting of 64 and click on the blue in the right eye. The screen will show a red frisket covering the face. Click on Process ▸ Invert Frisket and toggle the Frisket icon to Frisket Active. Use Process ▸ Effects ▸ Generic and the Wacky filter. The filter is applied just to the face - sorry Leonardo !

Pen'n'Ink

This image was created using the Inkpen tool followed by the Smudge tool. Part of one half of the face was drawn and grabbed as a sprite which was then flipped about the Y axis and pasted back to form the other half of the face. Additional lines were added to each side to stop the image looking too symmetrical.

Hands

Load the file **LucieBelin**. Using Magic Wand click on the *girl's right hand* just below the sleeve. You should get both hands and the book in the Sprite Pool, if you don't then click again in a slightly different place. Set the Sprite ▸ Soft Paste slider to 90% and paste the sprite so that the hands are below armpits.

Golf Ball

Select red from the Palette and clear the screen to red. Create a filled blue circle and fill it with a circular dithered fill using Blend Set 1 by dragging the fill arrow from the top left to bottom right of the circle. Make the red that you used for the background transparent in the Sprite menu and use Sprite ▸ Cut ▸ Rectangular to cut out the sphere - make sure that you have a good margin on all sides of the sphere. Clear the screen again, it should be blue. Use Sprite ▸ Sphere set to 80 and drag out a circle to fill half of your canvas. Now use Paint ▸ Fill ▸ Circular and Dithered with Blend Set 1 and drag the fill arrow from the bottom right of the canvas to the top left - you have a golf ball. If the fill does not penetrate all parts of the sphere then you did not leave enough margin around the sphere when cutting the sprite.

Rubbed

Use a blank white canvas and place the word TEXT, in black, on screen in 72pt Homerton font. Click on Process ▸ Make Last followed by Process ▸ Invert Frisket and then select the third brush on the third row in Paint ▸ Brush Shapes. Now use Paint ▸ Special ▸ Smear to smear the text so that the smearing is all around the text. Select white from the palette, make Frisket Active and do a Process ▸ Clear Screen. The only part of the screen cleared to white is the black text giving an appearance of charcoal used on paper.

Acorn 1

Load the supplied image called **Acorn** and then type the word `Acorn` into the Draw ▸ Text box using black text in Homerton 48 point. Place the text on top half of the acorn but inside the green boundary. Click on Process ▸ Make Last followed by a click on Undo. Toggle Frisket icon to Frisket Active. Use Blend Set 6 and do a Paint ▸ Fill ▸ Angled and Dither by dragging from top to bottom of the top half of the acorn. Note the text in the green of the original acorn. Click on Process ▸ Effects ▸ Emboss and note that the current Blend Set is used for the embossing.

Acorn 2

Load the supplied image called **Acorn** and then type the word `Acorn` into the Draw ▸ Text box using black text in Homerton 48 point. Place the text on top half of acorn but inside green boundary. Click Undo to remove the text, which is now held as a sprite in the Sprite Pool. Goto Process ▸ Effects ▸ Pattern and click on OK to place the word `Acorn` on the canvas in a pattern. Click on Process ▸ Make Last followed by a click on Undo to remove the pattern. Toggle Frisket icon to Frisket Active. Use Blend Set 1 and do a Paint ▸ Fill ▸ Angled and Dither by dragging from top left of the canvas to bottom right and note the repeated Acorn pattern.

11. Appendix 2 - !Options

The ProArtisan 2 disc also has an application called **!Options**. The icon for this is similar to the ProArtisan 2 icon with a fading towards the bottom.

To work correctly the **!Options** application must be in the same directory as !ProArt2.

!Options allows you to configure ProArtisan 2 by removing access to any menu options that you do not wish to be active. Any items disallowed are shown in the ProArtisan 2 menu as greyed out. Only menu items can be greyed out, you cannot disable Tool pane icons.

Running !Options

To run !Options double click on the icon. A window is automatically opened showing the Paint menu. The window can be opened to reveal the other menus. To disable a menu item click on it and it is greyed in the !Options menu.

To save your settings go to the !Options icon bar menu and click on Save. Changes do not take effect until you next run ProArtisan 2.

Next time that you run ProArtisan 2 the menu items that you greyed out in !Options will be disallowed in ProArtisan 2.

12. Appendix 3 - Colour Cards

ProArtisan 2 supports Colour cards from Wild Vision/Computer Concepts and the State Machine cards. These provide any 256 colours within the desktop from a possible 16.7 million colours. ProArtisan 2 does not support modes outside the desktop eg 15bpp modes.

ProArtisan 2 has been written with a completely independent palette which is then translated back to the standard Acorn 256 colour palette for normal use.

The Input/Output menu has a Palette facility that enables you to alter any of the 256 colours to one of the 16.7 million available. This means that it uses 24 bit values for colour storage.

Images with an arbitrary 256 palette (ie 24 bit values) can be loaded into ProArtisan 2 and, if the S icon in the Input/Output ▸ Palette is set, their palettes are automatically read and the desktop palette is changed accordingly to reflect the correct colours. The palette is always taken from the last loaded image and to restore a palette to a previously loaded image you must load the image again.

See page 51 for a fuller explanation of the Palette option.

The Future

At the time of writing (August 1993) ProArtisan 2 currently supports the cards listed above. If other cards that are compatible with the above are released then they should also work with ProArtisan 2. If new computers are released with 24 bit capability then hopefully these should also work with ProArtisan 2. If you experience any problems with any such cards or computers please contact us and tell us as we will do our best to make ProArtisan 2 compatible with them.

Index

!Fonts 35
!Help 7
1 20
16 20
3-D Fill 30

A

Acorn 1 72
Acorn 2 72
Add Last 56, 58
Angled fill 30
Anti-Alias 60
Auto blend sprites 44

B

Blend arrows 52-53
Blend colours 21
Blend set 21, 30
Blends 30, 32
Block filter 67
Brightness 66
Brush selection 23
Brush Shape 23-24
Butt - Draw style 36

C

Canvas 19, 25
Canvas size 18
Canvas units 18
Circle 34
Circular fill 30
Clear Screen 55
Clone -Spray, Special & Fill 26-28
Colour - Magic Wand 40
Colour card 51, 74
Colour editing 51
Colour opacity 21
Colour Shift 61, 70
Colours - Palette 20
Colours off the canvas 20
Contrast 60, 66
Copies - Print 50
Crayon 24
Create Canvas 17
Create Frisket 33, 56, 58
Crop to Window 67
Ctrl A 58
Ctrl I 57
Ctrl L 58
Ctrl X 55
Curve 34
Cut sprite 39
Cutoff 60, 70

D

Darken filter 60
Defining a Frisket 55
Delete Picker 21
Density - Spray 29
Details 47
Diffuse 27
Distance - sphere 42
Distort - sprite 41
Dither - fill 30-31
Dopple - Special 27
Draw 54
Draw mode 33

E

Edit Brush 24
Effects 63
Ellipse 33
Emboss 63

F

Facet filter 64
Fill 29, 41
Filled - Draw style 36
Filter Design 66
Filters 59, 66
Filters & Effects 58
Find Edges 64
Font size 35
Frisket 18, 21-31, 33, 36, 40, 55-60, 64, 69, 71-72
Frisket Active 56, 58
Frisket Colour 57
Frisket icon 56
Frisket Inactive 56, 58, 69

G

Generic filters 66
Golf Ball 71
Grey Shift 62
Greyscale 40
Grid 37

H

Halftone 64
Hands 71
Hard disc installation 7
Height 18, 35, 47
Horizontal displacement - Pattern 65
Horizontal offset - Pattern 65

I

Importing files 53
Info 17
Initialising your disc 6
Inkpen 31
Inverse filter 59
Invert filter 69
Invert Frisket 55-57
Invert - Grey shift 63
Irregular sprite cut 39

L

Landscape 50
Lighten filter 60
Line - Draw 34
Loading Sprites 45

M

Magic filter 25, 64
Magic Brush 24-25
Magic Wand 39
Main window 19
Make Last - Frisket 56, 58
Mid range boost 63
Minimise 18
Moana 71
Mode 49

O

Opacity 21
Options 73
Outline 69

P

Paint 24, 40
Paint mode 23
Palette 20, 33, 51
Palette editing - colour cards 52
Pattern effect 26, 65
Pebble 25
Pen'n'Ink 71
Pencil 31
Perspective 41
Picker - Palette 20
Pixel 18
Plain fill 27-29
Planets 70
Point size 35
Pointillist 27
Polygon - Draw 34
Portrait 50
Posterise 62-63
Print 49-50
Print Scale 50
Printer driver 49
Printer margin 49
Printing 47

Q

Quit 18

R

Rattan 25
Rectangle - Draw 33
Rectangular sprite cut 39
Remove 18
Remove all 18
Remove Dots filter 61
Remove Frisket 57
Rotate sprite 41
Round 36
Rubbed 71

S

Sample - Spray & Special 21, 26-28
Save 47, 49
Save as 49
Save Picture 47-48
Save Pool 48
Scale sprite 41
Screen 18, 51
Selecting Colours 20
Set Frisket 22, 33
Set pixel 24
Shaded 69
Sharpen filter 65
Show images 17
Show Palette 20
Show Sprite Pool 42
Size - Spray 29
Smear 27
Smudge 26
Soft paste - Sprite 43
Solarise 62
Special 26
Sphere - Effect 64
Sphere - Sprite 42
Spray 28
Sprite distort 41
Sprite fill 41
Sprite flip 43
Sprite mode 39
Sprite orientation 65
Sprite pool 36, 39-40, 42, 45, 48, 54
Sprite stretch 70
Sprites 53

Spritestretch 31
Square - Draw 36
Squash 47-48
Standard grey shift 62
State Machine 51
Stencil 21
Stroked - Draw style 36
Style 35-36

T

Technical Information 7
Text 35
Texta 70
Textb 70
Texture 25, 67
Tint 60
Tool pane 19
Transparent 24, 42
Try - text 35
Typeface 35
Typographic conventions 5

U

Undo 22
Unset Frisket 22, 33
Unset pixel 24
Unweighted - spray 28

V

Vertical displacement - Pattern 65

W

Weight - Fonts 35
Weighted - spray 28
Width 18, 35, 47
Wild Vision 51

X

X 21

Z

Zoom 22
Zoom scale 22